

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A process for the preparation of nucleated polyolefins, which process comprises forming a gel of one or more nucleating agents by dissolving the nucleating agent in a solvent, mixing the gel with a polyolefin powder, removing the solvent and extruding the mixture at a temperature no lower than the minimum temperature~~temperature~~ of the melting point of the polyolefin to obtain the nucleated polyolefin.
2. (Original) A process as claimed in claim 1 wherein one or more additives selected from the group consisting of antioxidants, antislip agents, acid scavengers, lubricants and UV absorbers is added to the gel of one or more nucleating agent before mixing with the polyolefin.
3. (Original) A process as claimed in claim 1 wherein the gel of the one or more nucleating agent is prepared by dissolving the one or more nucleating agent in a solvent and heating the solution to the boiling point of the solvent and cooling the solution.
4. (Original) A process as claimed in claim 1 wherein a second solvent is added to the solution of the one or more nucleating agent to gel the nucleating agent.
5. (Original) A process as claimed in claim 1 wherein the polyolefin is polypropylene.
6. (Currently amended) A process as claimed in claim 1 wherein the nucleating agent comprises a metallic salt selected from the group consisting of salts of sodium, potassium, lithium, calcium, magnesium, and aluminum with organic carboxylic acids.
7. (Currently amended) A process as claimed in claim 6 wherein the organic carboxylic acid is selected from the group consisting of aliphatic mono and dicarboxylic

acids of 2-16 carbon atoms, aromatic mono and poly carboxylic acids, and substituted aromatic carboxylic acids ~~and aliphatic and aromatic sulfonic acids~~.

8. (Original) A process as claimed in claim 6 wherein the organic carboxylic acid is selected from the group consisting of aliphatic mono and dicarboxylic acids of 2-8 carbon atoms.

9. (Original) A process as claimed in claim 1, wherein the solvent used for dissolving the nucleating agent is selected from the group consisting of water, ketones containing 3-10 carbon atoms, aliphatic alcohols containing 1-12 carbon atoms, aliphatic esters, ethers, cyclic ethers, hydrocarbons of 5-15 carbon atoms, mixture of hydrocarbons, aromatic hydrocarbons, petrol, kerosene, chlorinated hydrocarbons, dimethylformamide, dimethyl acetamide and dimethyl sulfoxide.

10. (Currently amended) A process as claimed in claim 1, wherein the solvent used for dissolving the nucleating agent comprises ketones having ~~preferably~~ 3-7 carbon atoms.

11. (Original) A process as claimed in claim 1, wherein the solvent used for dissolving the nucleating agent comprises aliphatic alcohols having 1-6 carbon atoms.

12. (Original) A process as claimed in claim 9, wherein the aromatic hydrocarbon solvent is selected from toluene and xylene.

13. (Original) A process as claimed in claim 4, wherein the second solvent used for gelling the nucleating agent may be a solvent or a nonsolvent to the solvent used for preparing solution of the nucleating agent.

14. (Original) A process as claimed in claim 4, wherein the second solvent used for gelling the nucleating agent is selected from the group consisting of alcohols, ketones, aliphatic hydrocarbons, aromatic hydrocarbons and esters.

15. (Original) A process as claimed in claim 4, wherein the second solvent used for gelling the nucleating agent is selected from the group consisting of methanol, ethanol, toluene, xylene, n-hexane, cyclohexane, acetone, MIBK and ethylacetate.

16. (Original) A process as claimed in claim 1, wherein the quantity of nucleating agent gel to polyolefin is in the range of 0.01 to 10 wt % based on polyolefins.

17. (Original) A process as claimed in claim 16, wherein the quantity of nucleating agent gel to polyolefin is in the range of 0.01 to 2 wt % based on polyolefins.

18. (Original) A process as claimed in claim 16, wherein the quantity of nucleating agent gel to polyolefin is in the range of 0.1 to 0.5 wt % based on polyolefins.

19. (Original) A process as claimed in claim 1, wherein the polyolefin is selected from the group consisting of homopolymers or copolymers of olefin with one or more ethylenically unsaturated comonomers.

20. (Currently amended) A process as claimed in claim 19, wherein the comonomer is provided in an amount of 10% or less based on the weight of olefin wherein the comonomer is not HDPE.

21. Cancel

22. Cancel

23. (Original) A process as claimed in claim 1, wherein the polyolefin is selected from the group consisting of polyethylene, polypropylene and ethylene-propylene copolymers.

24. (Currently amended) A process as claimed in claim 1, wherein the gel of

nucleating agent is mixed with the polyolefin gradually by mechanical blending, mechanically followed by removal of solvent from the blend by exposing the blend to air or heating in an oven or an air circulated oven, at a temperature of about 50°C.

25. (Original) Process as claimed in claim 1 wherein the nucleating agent gel is sodium benzoate gel.